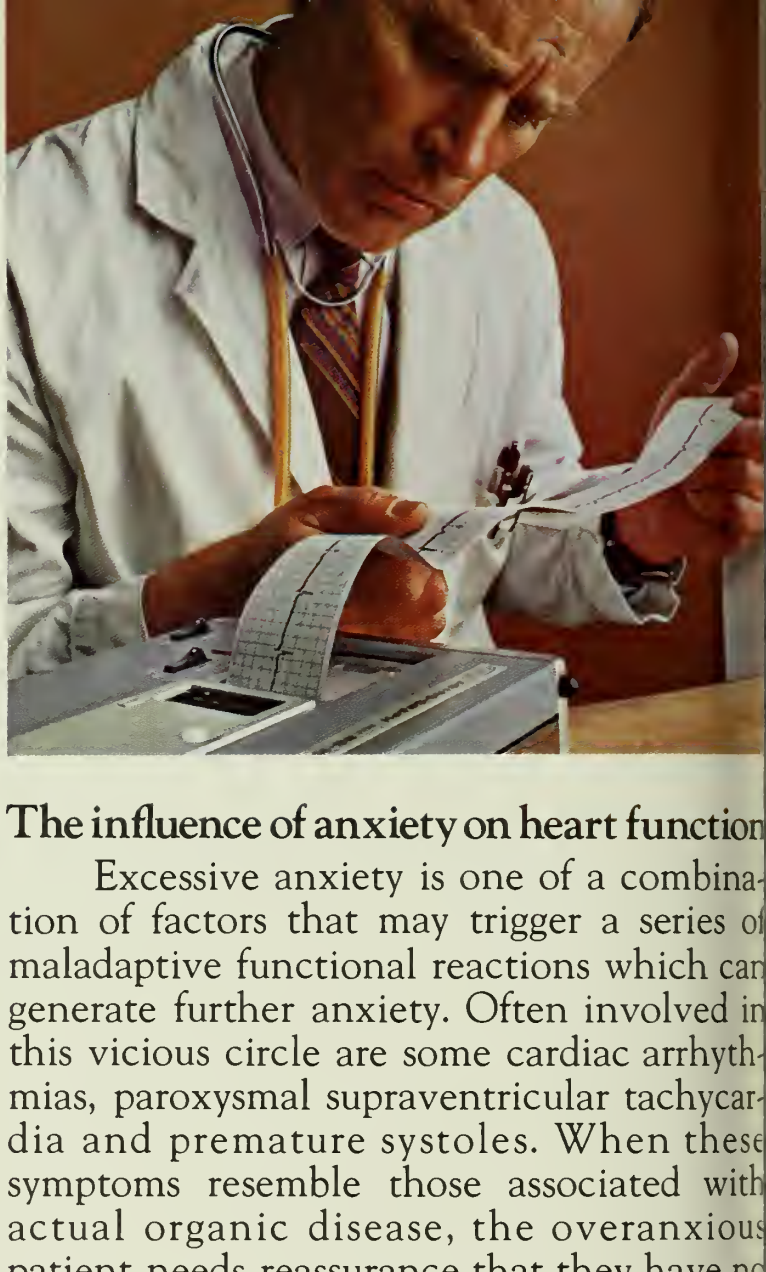
Harvard Medical Alumni Bulletin

Mar. / Apr. 1973

Thanatology at HMS

When cardiac complaints occur in the absence of organic findings, underlying anxiety may be one factor



The influence of anxiety on heart function

Excessive anxiety is one of a combination of factors that may trigger a series of maladaptive functional reactions which can generate further anxiety. Often involved in this vicious circle are some cardiac arrhythmias, paroxysmal supraventricular tachycardia and premature systoles. When these symptoms resemble those associated with actual organic disease, the overanxious patient needs reassurance that they have no

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions

organic basis and that reduction of excessive anxiety and emotional overreaction would be medically beneficial.

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in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Cover: The drawing was done by Marilyn Burdette during the final stage of a terminal illness at the Middlesex County Hospital. Courtesy of Mr. Burdette.

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Overview

Tuition Increase Slated for July

The deans of Harvard Medical School and Harvard School of Dental Medicine announce an increase in tuition and in room and board beginning July 1, 1973. Deans Ebert and Goldhaber said, "An increase in tuition from $2750 to $3000 is necessary for the 1973-74 academic year, and, regretfully, we will be forced to raise tuition by an additional $250 on July 1, 1974."

For students residing in Vanderbilt Hall, and for those who take their meals in the Hall dining room, there will be an increase of approximately five percent over current rates. The Deans estimated this means a $40 increase in board rates, and, depending upon accommodation, a $25-40 increase in room rates.

The chairman of the Financial Aid Committee of the Faculty of Medicine, Perry J. Culver '41, reiterated the policy of both schools relative to the financial needs of admitted students. (Neither school considers the financial status of candidates during admission). Dr. Culver said, "We remain committed to the belief that there should be no financial barriers to either medical or dental education. Once students are accepted, every effort will be made to assist them in meeting the costs of their education through scholarships, opportunities for medically related employment, and loans."

Richard J. Olendzki, associate dean for financial affairs, stated that adequate loan funds will be available to help students absorb the additional costs. "Although the amount of available funds for scholarships is currently insufficient to meet the needs of students," he said, "every effort is being made to seek additional support."

Ryan Named Special Assistant

Richard M. Ryan, Jr., S. D. Hyg. has been appointed special assistant to the dean of the faculty of medicine. Dr. Ryan has served as assistant to the dean for rehabilitation planning since July 1971.

According to Dean Ebert, Dr. Ryan will be his major liaison with the chiefs of services and the directors of those teaching hospitals affiliated with the Harvard Medical School.

For the present, Dr. Ryan will continue to be concerned with plans to bring together medical and hospital resources of the Harvard Medical community in the provision of better total care for physically disabled persons.

Prior to joining the administrative staff of the Harvard Medical School, Dr. Ryan served as executive secretary of the Regional Hospital Planning Committee of Brockton, Mass., and directed various research and planning projects at the Medical Foundation of Boston.

Dr. Ryan serves as a member of Boston Mayor Kevin White's Commission for the Physically Handicapped. He is a member of the National Association of Social Work, the Academy of Certified Social Workers, the American Public Health Association, and is an association of the Massachusetts Hospital Assembly.

A former resident of Cleveland, Ohio, Dr. Ryan received the A.B. degree in sociology in 1961 and the M.S. degree in social services in 1964 from Boston University; the M.S. degree in hygiene in 1967 and a doctorate in public health, S. D. Hyg., in 1971 from the Harvard School of Public Health.

HSPH Launches Experimental Program

The launching of an experimental, two-year Master's degree program by the Harvard School of Public Health is announced by Dean Howard H. Hiatt '48.

The program is designed to prepare carefully selected college graduates for careers as health planners, analysts, or managers. Beginning this fall, the new program, university-wide in scope, will provide students with educational offerings appropriate to their interests.

"The goal of the program," said Dr. Hiatt, "will be to prepare able, socially concerned young people to meet a need for professionals sophisticated in medicine and health, on one hand, and expert in the analytic sciences on the other.

"This course comes at a time," he stated, "when it is evident that there is a great social concern in undergraduates at Harvard and elsewhere, and an awareness of serious health problems in this nation. Until now, they largely assumed that they could satisfy their desires to prepare for meaningful health careers only through entry into medical schools."

According to Dr. Hiatt, the new Harvard School of Public Health program will provide a background in biology and medicine sufficient to permit graduates to deal knowledgeably with physicians and biological scientists, and the essential elements which are lacking in medical education, namely analytic sciences, economics, administration and public policy.

The two-year program will include a first-year of graduate level work entirely at the School of Public Health with courses in human biology and medicine; quantitative analysis of health programs; environmental health evaluation and management; and perspectives on health care and introduction to welfare and health economics.

The program for the second year will be undertaken with faculty from the School of Public Health, the Harvard Business School, and the John F. Kennedy School of Government. Students will have choice of a health management-oriented program at the Harvard Business School; a health policy-oriented program at the John F. Kennedy School of Government; and a program in several health specialty areas offered by the School of Public Health.

Target size of the initial class will be approximately 20 students, and those completing the two-year program will receive a Masters in Science degree.

With the recognized possibility that some students would wish to continue and obtain a doctorate degree, Dr. Hiatt is hoping to set up such a program through the School of Public Health.

As currently envisaged, such a doctoral program would include an internship cooperatively arranged with a policy-making or operating health agency outside the school followed by the preparation of a doctoral dissertation while taking elective subjects at an advanced level in health and analytic disciplines.

HAC Features China Black Fiction, Film

All alumni of Harvard Medical School are invited to return to Cambridge in July with spouses or singly, to participate in two exciting offerings in continuing education sponsored by Associated Harvard Alumni in conjunction with the Harvard Summer School.

Harvard Alumni College 1973 will offer two sessions; the first featuring a single course spanning ten days, the second consisting of two courses within a six-day period.

Session I, from July 4-13, is entitled China and will be an in-depth study of China's people, origins, revolution, policy and contemporary problems, both internal and global, combined with an equally comprehensive look at Chinese art and culture.

John King Fairbank, Frances Lee Higginson Professor of History and for 17 years, director of the East Asian Research Center at Harvard, will analyze China's old ruling class society and government, the influx of Western influences, and subsequent processes of reform, rebellion, and revolution. He will analyze the British, American, Japanese, and Soviet approaches to China and the achievements of Sun, Chiang, Mao and others in their day, all as a basis for class discussion of policy problems and future prospects.

Wilma Fairbank studied for four years in Peking and was subsequently Chief Cultural Officer of the American Embassy, first in Chungking and later in Nanking. Her lifetime studies of Chinese art and archeology have recently been published by the Harvard University Press. Mrs. Fairbank will present important examples of Chinese art of the great periods; bronzes, sculptures, and paintings, and architecture with extensive use of slides. A major feature of the course will be preparation for and visits to the famous collections of Chinese art at the Boston Museum of Fine Arts, the Peabody Museum of Salem, and Harvard's own Fogg Art Mu-

seum. Discussion of post-revolutionary developments in the arts will be illustrated by slides from recent travels. The Fairbanks will encourage students to take extra initiative to work on short supplementary projects under their tutelage.

Session II, from July 15-20, consists of two parts, Black Fiction in America, and Film: Theaters of Love.

Roger Rosenblatt, assistant professor of english, director of expository writing, and master of Dunster House will gather the most important aspects of his popular Harvard course, Black Fiction in America, to present a five lecture course with discussion of the pattern of black novels and short stories written in America from the 1890's to the present. He will discuss the place of black fiction in American intellectual history as a whole. Some important questions to be considered include: Is black fiction a genuine subject? Is it to be treated separately from other fiction? What are the literary conceptions of black religion, humor, romantic love, art and music, education, tragedy and heroism?

Stanley Cavell, Walter M. Cabot Professor of Aesthetics and the General Theory of Value, will show five masterpieces of film by Vigo, Renoir, Hitchcock, Welles, and Bergman and will focus his lectures and discussions on them. Professor Cavell has selected these films on the assumption that "whatever else movies have been or may be, certain among them are works of art, demanding and rewarding the same level of attention that objects within the other major arts are known to demand and expected to reward." The title was chosen because all the films "have to do with a quest for love and with fantasies of love which either defeat or reflect that quest." The discussions will emphasize critical practice to promote an understanding of the value of film beyond that of simple entertainment.

Alumni attending the courses will live in Kirkland House. Enrollment in each session is limited to 130 and acceptance is on a first-come-first-served basis. Applications must be accompanied by a deposit of $25.00 per person for each session and should be sent to Harvard Alumni College, Dept. R., Harvard Summer School, Holyoke Center 735, Cambridge 02138.

The fee for Session I is $275 and for Session II, $200. This fee covers registration, tuition, housing, all lunches and special dinners, as well as use of College libraries, the University Health Services, Harvard Summer School activities and classes, and athletic facilities.

Reminiscences

Those of us in the class of '32 had four outstanding basic science teachers: Dr. Robert Green, anatomy; Dr. Otto Folin, biochemistry; Dr. Walter Cannon, physiology; and Dr. Hans Zinsser, bacteriology. For me, the greatest was Zinsser. Over 40 years ago, he sparked an interest within me for bacteriology that has endured over the years. Immunology was in its infancy at the time, and a voluntary course with laboratory demonstrations succeeded the required course in bacteriology. Following each lecture, a group of students would surround Zinsser asking questions; and with enthusiasm and patience, he would answer them.

Hypersensitivity was one of his favorite topics. I can still vividly remember an experiment with a rabbit that had been previously injected with horse serum, and then, in front of the class given a second injection of serum intravenously in an ear vein. We watched with amazement as the rabbit promptly died. "That," said Dr. Zinsser, "is anaphylactic shock."

At the conclusion of a lecture on allergy, a group of buzzing classmates gathered around him. One, a short individual, elbowed his way through the group and, planting himself directly before Dr. Zinsser, asked, "Dr. Zinsser, if a pregnant woman ate eggs three times a day for nine months, would the baby be allergic to eggs?" Without hesitation, the professor answered, "If I kicked you in the rump three times a day for nine months, do you suppose that you would have been sensitized?" The entire group dissolved in laughter and dispersed. He was a great teacher!

Wesley W. Spink '32

Promotions and Appointments

Professor

Walter H. Abelmann: medicine at Boston City Hospital
Florencio A. Hipona: radiology at BCH
Franz von Lichtenberg: pathology

Associate Professor

Alan C. Aisenberg '50: medicine at Massachusetts General Hospital
Dietrich P. Blumer: psychiatry at BCH
John T. Chaffey: radiation therapy at Shields Warren Laboratory and Joint Center for Radiation Therapy
Robert W. Colman '60: medicine
William M. Daggett: surgery
Gerald D. Fischbach: pharmacology
N. Thorne Griscom: radiology at The Children's Hospital
Peter G. Herman: radiology at Peter Bent Brigham Hospital
Stanley E. Order: radiation therapy
J. Stuart Soeldner: medicine
Melvin Tefft: radiation at MGH
Ronald A. Yankee: medicine at Children's Cancer Research Foundation

Associate Clinical Professor

Samuel Bojar: psychiatry
Gerald S. Foster '51: medicine
Herbert C. Schulberg: psychology in the department psychiatry

Assistant Professor

William M. Abbott: surgery
Arthur L. Boyer: radiation therapy at MGH
Christos Christoforides: anesthesia at Beth Israel Hospital
Miriam Cohen: psychology in the department of psychiatry
James J. Daly: pathology at MGH
George C. Fareed '70: biological chemistry
David G. Fromm: surgery
Michael Goitein: radiation therapy
Bruce L. Holman: radiology
Irving Hurwitz: psychology in the department of psychiatry
Samuel H. Kim '62: surgery at MGH
Gerald E. Kochansky: psychology in the department of psychiatry at Massachusetts Mental Health Center
Matthew M. Lavail: neuropathology
Robert J. Lefkowitz: medicine
Roger G. Mark '65: medicine
Nicholas E. O'Connor: surgery
Stanley J. Robboy: pathology at MGH
Hubert S. Sear: radiology at MGH
David A. Shafritz: medicine
Salvador Treves: radiology
Gordon C. Vineyard '63: surgery at PBBH
Andrew L. Warshaw '63: surgery
John E. Wennberg: preventive and social medicine
Warren M. Zapol: anesthesia

Assistant Clinical Professor

Robert J. Carey: medicine
Francis L. Comunale: anesthesia
Edward R. Loftus: periodontology
Lawrence M. Miller: medicine
W. Davies Sohier, Jr. '46: medicine
William B. Stason '60: medicine

Senior Associate

Pierre J. Stoffyn: biological chemistry

Principal Associate

Tamas Sandor: radiology (physics)

Thanatology at HMS

by Joan F. Rafter

Managing Editor

How would you tell one of your patients he or she had a terminal illness? What emotional effect would it have on you? Might you be frightened, sad, or simply view it as one of the unpleasant things that a doctor must do, and get it over with as soon as possible? Or, maybe you wouldn't say anything at all, and delegate the task to a nurse, house officer, chaplain, or medical student.

There are physicians who spend much of their time studying or caring for patients who are close to death or in a serious life-death crisis, and recently, a new word has found its way into the literature to describe them: they are called thanatologists.

Although many Harvard alumni and faculty would merit this appellation, the *Bulletin* selected five to learn what they do and how they do it.

Dr. Avery Weisman is an associate professor of psychiatry at the Massachusetts General Hospital, and author of the recently published, *On Dying and Denying: A Psychiatric Study of Terminality*. His professional interest in death and dying began over 30 years ago, when, as a resident in pathology and neuropathology at the Mallory Institute of the Boston City Hospital, he realized that an autopsy shows only what a patient dies with, not always what he dies from, and never what he lived for. His current interests are the coping strategies that patients use in managing serious illness, particularly when faced with death and dying. He has been principal investigator of three research projects relating to serious illness. In one of these, called Project Omega I, the investigation concerned the psychosocial factors in terminal illness and suicide. Presently, with his colleagues, Dr. Weisman is seeking to determine how the average patient and family cope with neoplastic diseases, from the period of diagnosis, throughout their course. The basic assumptions of Project Omega II, as it is called, are that malignant diseases create psychosocial problems for both patients and families; these problems differ at various stages of disease and treatment; and coping behavior can be identified along with social and emotional conflicts that may impede medical and surgical management.

Dr. J. William Worden is associate in psychiatry (psychology) and works closely with Dr. Weisman as the research director of both Project Omega I and II. He came to thanatology from student mental health work with a background in philosophy, theology and clinical psychology. He is particularly interested in developmental psychology and sees reckoning with death as the last developmental task of life.

Dr. Thomas P. Hackett is associate professor of psychiatry at Massachusetts General Hospital where he is also chief of the psychiatric consultation service. From 1958 through 1967, he worked with Dr. Weisman caring for terminally ill cancer patients. Since 1967, he has been working with Dr. Cassem on the psychological problems of patients with coronary heart disease.

Ned H. Cassem '66 is clinical instructor in medicine. His interest in thanatology began in 1964 when, as a second-year medical student, he worked on a project with Dr. Hackett in the Tumor Clinic studying why and how long cancer patients delayed in coming to the hospital after they knew the symptoms of their illness. From this experience stemmed his interest in the problems faced by terminal patients. In addition to his present work with Dr. Hackett, Dr. Cassem, who is also a Jesuit priest, devotes a substantial portion of his time to Youville Hospital (formerly the Holy Ghost Hospital for Incurables) in Cambridge. In 1970, the Boston Theological Institute asked him to supervise a group of students studying the care of the dying. Today, nine seminarians from the eight theological schools in the area study "Pastoral Encounters with the Disabled and Dying" under Dr. Cassem's tutelage, and act as chaplains' assistants at Youville.

Dr. John Noble, Jr. is instructor in medicine and director of the Middlesex County Hospital. The hospital, formerly a TB sanitorium, today offers multi-faceted services, among which is a 53-bed unit for patients requiring continuing care. Of these 53, about one third require rehabilitative services prior to discharge; one-third are in the final stages of life; and another third suffer from multiple disabilities and require continuing, hospital-level care.

The *Bulletin* chose the question and answer approach in its interview, hoping to shed some light on the many various aspects of caring for patients who face death.

What, actually, is thanatology?

Weisman: The term was coined by Dr. Roswell Park, after whom a famous institution for the study of cancer was named. I use the term, thanatology, to mean the scientific study of death, dying, and life-threatening behavior. Obviously, problems of death and dying belong to almost any field, law, ministry, and so forth, so it is not the special province of the medical profession. Nurses, social workers, psychologists, clergy — all professions concerned with health care can become thanatologists.

Why the sudden interest in thanatology? After all, death has been with us since time.

Worden: I'm not certain anyone can answer that precisely, but I think it is a byproduct of the emerging climate of openness with taboo topics we see all around us. Not only is sex more openly discussed and researched but likewise death can be observed more systematically.

Weisman: There is no "sudden interest" in thanatology. Years ago, Osler, for example, had a deep concern about dying patients. But we live in a technological society today, where communication is quick, disasters are publicized, and few people can isolate themselves from an awareness of violence, destruction, and the dangers of just being alive. We also live in an increasingly impersonal society, with more and more of what used to be considered "private" matters becoming computerized data. Young people are somewhat shocked by how readily they can be programmed, and this fact, along with greater openness, as Dr. Worden says, a greater ease in discussing taboo subjects, has led many people to wonder about the meaning of their own life. Once you begin to think about your life, you cannot help but reflect upon your death. If we want to live our own life, then part of this must involve how we can die our own death, without having that right taken away from us.

What you are saying is that until recently, we have tended to deny death. Why?

Weisman: We tend to deny death because it has been thought of as so totally evil, so deplorable, so opposite to the values we seek in life. Besides, since death is inevitable, we can deal with it in many instances, only by postponing, if possible, but for the most part, by putting it out of mind.

Cassem: Everyone retains basic fears and infantile fantasies from childhood, the most persistent being, "nothing bad can happen to me." Since death is seen as evil, we deny it will ever happen to us.

Noble: Also, because we live in a society where the aging process is thought of as a degenerative one, we tend to avoid thinking about the unpleasant, final stages of life.

Worden: The counterpart of that is our strong cultural emphasis on youth.

Hackett: We deny death because we fear it.

Weisman: We fear dying more than we fear death. Dying seems to signify loss of control, and in our progress-oriented society, to die means to fail, or to fail means that we die, to some degree.

Your use of the editorial "we" indicates that physicians, being part of society and this death-denying culture, also fear the end of life.

All: That's right.

How do they resolve their conflicts when called upon to treat a dying patient?

Hackett: Physicians fear death as much as anyone else and find it extremely difficult to care for terminally ill patients because they represent a kind of personal failure. All through medical school, internship, and residency, the physician is geared toward healing, toward taking positive action to treat and hopefully cure his patient. To sit back and watch someone die is a type of behavior that is diametrically opposed to the one he has learned. Once embarked on the traditional medical course of curing,

he seldom feels inclined to change. Why should he? There is little reward in treating the dying patient other than one's own personal gratification. Furthermore, it is not difficult to avoid the dying patient. He seldom make demands on the doctor's time as long as his symptoms are tended to. It is rare to find a dying patient who directly asks embarassing questions about his mortality.

Noble: It is difficult to understand why we cannot meet the needs of patients who cannot be cured. I think it is a result of the profession's inability to focus on the needs of the person rather than on the pathophysiology of the disease. To carry something that Dr. Hackett said a bit further, I agree that, other than intense personal satisfaction, there is little reward in treating these patients. This is one of the failings of medicine today. In a teaching hospital, the reward system is centered on the ability to make exciting, esoteric diagnoses and to initiate challenging forms of therapy. Death represents failure for the physician, and he is rewarded only when he can effect a miracle.

Cassem: Perhaps the profession's aversion to dealing with dying patients stems from the fact that to do so, the physician must come to terms with his own feeling about death.

Worden: Exactly, he must seriously confront his own mortality.

Cassem: And what the care of the dying patient provokes, for those who are willing to take the risk of becoming involved, is all the unfinished business we ourselves have.

Weisman: Who can confront his own mortality without first denying it, and then trying to mitigate it in some way? I have noticed an important paradox concerning different uses of denial by patients, families, and physicians. If the patient has a treatable malignancy, or even if he doesn't, the doctor handles the situation appropriately, still feeling that something can be done. At the time that the diagnosis is made, the family and patient may feel shocked and powerless, even angry. Later, however, when the patient and family have learned to live with an inexorable situation, it becomes more and more difficult for the physician to stand by, in direct proportion to what the doctor feels can be done. In some cases, just when a patient needs to feel close to the doctor, the physician withdraws — all in good conscience, I might add.

Can anything be done to change this pattern?

Hackett: First of all, let me say that I don't think every physician should be required to deal with the dying. It is crucial that each of us recognize his own limitations in this area; there are some doctors I know who are unable to face dying patients. For example, I could never be comfortable caring for dying children. For the majority of physicians, however, the art of caring for dying patients can be learned. Perhaps the most difficult part of this is learning how to be natural with these patients, and especially how to listen to them. You don't really have to do much else but learn to listen. Two decades ago, the all encompassing question for the physician was, "What do I tell the patient?" At that time, 90 percent of physicians advocated telling the patient nothing. But most felt it was appropriate to level with the family. Now if you tell the relatives and expect them to act in any normal kind of way toward the patient, you are asking them to defy the laws of personality. You are, in effect, asking them to live a lie and most of us can't act that well. Today we have hard data to support the fact that the patient should be told. Every research project done on this subject produces the same data: the patients know the truth despite what they have been told. The telling simply opens up the way for communication and lessens anxiety and depression. Telling is the first step in treatment. Information need not be thrust on the patient; it should be given in a natural way — often in response to an indirect or veiled question.

The other side of telling is listening. The patient will rarely ask you to give the date of his demise; he will probably not even ask you directly if he is going to die. He will approach the subject indirectly, perhaps by announcing that he is going to build a new house or take a long vacation. At this point he wants to be told something about his future, but the information you divulge should be tentative, such as "Perhaps you'd better delay making plans for your vacation because you might not feel up to such an extended trip." If the patient wants to know more, he will continue the conversation.

Physicians must learn to accept anger. Relatives and family are angry at the patient for causing them inconvenience, at the doctor for letting the patient die, at the hospital for their outrageous charges, and at God for deserting them. But it is the physician who bears the brunt of this anger because of his visibility.

Also, it is difficult for a doctor to learn to content himself with symptomatic relief. There are two kinds of skills required to treat the dying. One is the personal art of developing a relationship with the patient which carries with it the commitment and loyalty of a friendship. The other is knowing how to use psychoactive drugs and narcotics because some of the problems that arise defy normal pharmacological intervention and you must be able to improvise. Of the two, the first is by far the more important.

Weisman: Many years ago, Dr. Jacob Bigelow, one of the Harvard greats, wrote that the physician has four responsibilities; diagnosis, cure (if possible), relief, and — this is often overlooked — safe conduct. Safe conduct for the dying is feasible, when cure is out of the question. It requires that the doctor be accessible, be there, maintain the patient on as high a level of function as possible, consistent with physical practicality.

Hackett: Even being in the room with a dying patient can be difficult. You constantly think you must do something, like start an I.V. or examine the chest. You begin to feel guilty, because you are well. You don't know what to say.

Cassem: But here again, this can be learned. I often find that patients don't really expect answers to their awesome questions — they want human warmth, a hand in theirs, a feeling of compassion and empathy. One of the reasons it is so difficult for us to hear even the implication "Why should I have to die?" is that we begin to hear the faint elfin voices of our own losses. To be effective in caring for the dying, we must learn to integrate the losses we have sustained. Loss is cumulative, but so is the integrating process. If we can deal with each loss as it comes, and work through the psychological grieving process to set it in perspective, it becomes growth work, and the growth achieved is also cumulative.

Let's talk about grieving and bereavement.

Weisman: Only in recent years have we studied grief and bereavement as pathogenic elements as well as a normal process, influenced by the special social roles that people play and the structure of the group in which they live. I think that there is a so-called normal process of bereavement, but more importantly, that families need much help in coming to terms with the death of a close relative, and even after death, need practical assistance before they can become operational again. There are many "grief reactions" besides that of depression. Hospital psychiatrists should become familiar with the expected course of uncomplicated bereavement.

Does your work with dying patients also include studying or caring for the survivors in any way?

Weisman: It is very difficult to get survivors to participate in clinical investigation, especially in the early days after death of a loved one. But work in other centers has shown that people who are recently bereaved are apt to come down with various physical and psychological ailments much more often than comparison groups.

Noble: Our plan of care at Middlesex County includes urging families and children to visit the terminal patient and wherever possible, we encourage patients to go home for a weekend, a holiday, or a visit, even if it's only for Sunday dinner. This allows time for relationships to be resolved in a natural manner. The terminal patient is not rejecting the family, but rather dissociating himself from intense personal relationships.

Weisman: I have been interested in the conjunction of suicide attempts in cancer patients. It seems to be rather rare, but in the small series we have, suicide attempts result from psychosocial disruption, a disturbance in a patient's image of himself or herself with respect to those who are significantly close. It is not the prospect of death that generates despondency, but the prospect of being isolated and alienated from life. Suicide, actually, is the prototype of non-coping.

How do patients cope?

Worden: In her book *On Death and Dying,* Elizabeth Kübler-Ross describes stages that terminal patients pass through during a terminal illness. These are denial, anger, bargaining, depression, and acceptance. From our work on the Omega project, we have seen patients who have experienced one or more of these stages but certainly not in any given order. Denial is frequently intermittent, and anger tends to be associated with the early stages, and in our experience, is much more prevalent among the young, but even they can come to a kind of acceptance.

Do most patients eventually reach a level of acceptance?

Noble: I would say so; very few patients use denial or anger in the final moments of life.

Weisman: Patients cope better with the fact of death than most people realize. I think that many people, hungry for a guide in a frightening, as well as perplexing domain, have misused Dr. Kübler-Ross' outline. It is not as neat as she seems to make it appear. We have seen the sequence as she describes it, but we have also seen the reverse. The Ross-Kübler sequence, if you will. Actually, her five stages refer to almost every human emotion we know, except that of laughing it off. There are patients who adopt a kind of humorous coping strategy, difficult though it may be to imagine. And I don't mean just "graveyard humor," but a true perspective upon the human plight, which can make us laugh and cry at the same time.

What do you think of the claim that is being made today for a patient's "right" to a dignified death?

Cassem: Every one of us, I think, is against the senseless prolongation of life. But just as patients have the right to die in dignity, so too have they the right to all that modern technology can do. There are two aspects to the question of using heroic measures. First, the reason they exist is that they have done wonders for many people. When first proposed, as with aortic valve replacement in elderly patients, they are viewed by some as inhuman or cruel. But they are blessings we and patients are often grateful for and we must learn from experts what such measures can offer. Second, without false promises, the patient should be told carefully and clearly about what the procedure entails and can offer him, and his chances for success. The final decision to opt for the procedure must be his.

Weisman: Of course, any patient has a right to a dignified life, and this includes death as well. Prolonging life may mean prolonging dying. It can be a technological achievement, but a human failure in that we may not have kept faith with our patient. It is a tragic fact that sometimes we treat a dead body with more reverence and dignity that we do the living person in his last moments.

Why is that?

Weisman: That's a long, long story, starting with the primitive's fear of a dead body and of ghosts. We have rituals and ceremonies that honor the dead, but not the dying. Other professions are involved. Yet there is always something of the sorcerer about any physician that the public will not relinquish. And there is something about the physician that makes him or her feel that magic is required.

Should medical schools teach a course on the care of the dying?

All: Definitely.

How should it be structured?

Hackett: It should be a longitudinal course with a bare minimum of didactic material; the emphasis should be on direct patient care.

Cassem: Right, the student must feel some responsibility for the dying patient and work through the demands made by their relationship. These demands express what is really the essence of the doctor-patient relationship.

Weisman: Many medical schools are already giving courses on thanatology. Ideally, however, it should be part of clinical work, so that doctors in training can learn how to recognize symptoms and signs of the pre-terminal stage, when people start to die, for instance, how to talk and listen to patients, and, in short, know that it is a person who dies, not simply a disease that runs its fatal course. Let me cite another example. Most teaching hospitals have weekly death rounds, when the clinician, radiologist, laboratory specialists, and pathologist compare their findings about recently deceased patients. We are becoming acquainted with the "problem-oriented" approach to patients. As a rule, few people talk about the patient as a person during death rounds. If we could ask only two questions, we would learn much about death: Did you expect this patient to die at the time of admission? and Why? These questions would focus our thinking a bit more towards the mechanisms of death, away from mere dissection.

Worden: The focusing you mention is important but death education should be more than a cognitive exercise. A well-led group experience where students can confront their feelings regarding their own mortality and death would be very effective. Each of us has what I call a personal death history. Our first experiences with death strongly influence how we handle subsequent losses and to some extent, how we feel about our own death. Such an encounter group experience would permit fears to be acknowledged, discussed, and worked with. Another thing I'd like to mention is a simple, but often overlooked point. Death is not a geriatric issue. Persons of all ages die. Also thanatologists have a responsibility for patient care; theoretical research is not enough, there must be an application of research findings that will make a difference in terms of management.

Noble: Exactly. Perhaps the greatest challenge in medical education today is to educate, train, and produce physicians who will provide the patient care needs of the next 30-40 years. To deliver truly comprehensive care, we must not only be able to treat acute illness, but also treat illness as it becomes prolonged and leads to the end of life. Medical schools should focus on the role of the physician as the provider of total care.

As Francis Weld Peabody so eloquently said, "The secret of the care of the patient is in caring for the patient." So it is with the thanatologists.

Funeral and Memorial Societies

by George S. Richardson '46

Editor

"The circumstances of the death do not admit of any effective competition or any precedent examination of the charges of different undertakers, or any comparison and consideration of their supplies; there is not time to change them for others that are less expensive . . . If there be any sort of service, which principles of civil policy and motives of ordinary benevolence and charity, require to be placed under public regulation, for the protection of the private individual who is helpless, it is surely this, at the time of extreme misery . . ." Sir Edwin Chadwick, 1842, quoted by Jessica Mitford.

"There is one thing in this world which a person don't say — 'I'll look around a little and if I can't do better I'll come back and take it.' That's a coffin. And take your poor man, and if you work him right he'll bust himself on a single layout. Or especially a woman." Mark Twain.

The Continental Association of Funeral and Memorial Societies (59 Van Buren Street, Chicago, Illinois 60605) lists member societies in 36 states and the District of Columbia. These societies have come together under widely differing auspices. Within New England, for example, the Memorial Society of Southwestern Connecticut was formed by churches in the area, seven of whom are represented on their Board of Directors.

The greater New Haven Memorial Society, on the other hand, was initiated by the Cooperative Consumers of New Haven, an organization which, at its outset, was largely concerned with retail prices. I became president of the Memorial Society of Massachusetts (now the Memorial Society of New England) at its founding a little over ten years ago, and am now again president after an interval of several years. This society was founded under Unitarian auspices, is housed in an Episcopal church, and has Protestant, Catholic, and Jewish members on its board.

Who wants a cheap funeral?

The average American apparently does not if we can judge from the prices usually paid for a funeral. The available figures, based on 1969 costs and income reported by 779 funeral directors to the National Funeral Directors Association, with 17.3 percent inflation rate added to adjust to present prices, show an average of $1,507 for the United States with a range from $1,327 in the West to $1,616 in the Mid-Atlantic states. One might presume that people, at these prices, are obtaining something that is religiously and esthetically meaningful to them. There is the problem, however, alluded to in the quotations at the head of this article. Most funeral directors require that the purchase of a casket be part of the services they render. Not infrequently, high-pressure sales techniques are used which would be more appropriate in the sale of an automobile or some such item in which the customer has the opportunity to reconsider, to make comparisons, and to refuse to buy if he so desires. Sales approaches which are discussed in tradebooks used by funeral directors include various techniques for the sale of caskets. The purchaser is shown a fairly expensive casket. If he refuses it, he is shown an obviously inferior model. When he recoils at this, he is led back to another model in the same price group as the first. The customer is not provided with a complete list of available goods and services. Not uncommonly, different customers are charged different prices for the same items. In many states, a licensed funeral director is required for the transportation of a body, and, even when no casket has been purchased, funeral directors have been known to charge large amounts for such transportation. Jessica Mitford cites an instance in which a person was charged $250 for having a body moved five miles between an old-age home and a crematorium. There is some real evidence that the public is reacting against these practices. A California statute enacted in 1971 requires a funeral director to provide a list of the price of the professional services offered, including a statement which gives the price range for all caskets offered for sale. In addition, each casket must carry a marker which displays the price and must be priced individually, irrespective of the type of service purchased. New York Public Health Law No. 3440A requires funeral directors to submit an itemized statement of all charges at the time funeral arrangements are made.

The cost of a funeral can readily absorb the entire amount of hard-earned death benefits owed to a union member, leaving little or nothing for the widow and surviving family. In at least one instance, recent statutory law has moved in the direction of accepting a costly funeral. In New Jersey at the present time, auto accident insurance provides a sum of $2,000 for funeral expenses.

Do memorial societies provide cheap funerals?

Only a few memorial societies have an actual contract with a funeral director. These societies are actually able to obtain services at rates well below the average. The Bay Area Funeral Society in San Francisco (not to be confused with the Bay Area Memorial Society, a commercial group) is an example of a society which has a contract. It is a bilingual organization, and is successful in serving both the English and Spanish speaking community. The Memorial Society of New England expects its members to make their own arrangements with funeral directors, and keeps a record of the experience of members in these negotiations for the benefit of other members. Most memorial societies, however, are not service organizations. My own viewpoint is that the main reason for the existence of a memorial society is *not* the provision of a cheaper funeral.

What do memorial societies do if they don't provide cheaper funerals?

The true goal of memorial societies, in my view, is not a specific price attached to a set of funeral services, but a mature decision by every person, every family about what for them constitutes a truly meaningful funeral. Memorial societies provide the basic knowledge about the laws and ethics involved. The Memorial Society of New England, for example, provides an up-to-date pamphlet entitled "For Freedom of Choice," and a copy of the small booklet by Ernest Morgan, now in its sixth edition, entitled "A Manual of Simple Burial" (Celo Press, Burnsville, N.C.). Furthermore, the memorial society provides a group setting in which it is easier for people to discuss this taboo topic. This issue of the *Bulletin* shows that, for the moment, in some cities, talking about dying is "in."

Are memorial societies trying to put funeral directors out of business?

Actually, funeral directors are likely to put other funeral directors out of business. There are 950 funeral establishments in Massachusetts, involving 741 embalmers, 199 funeral directors, and 1,067 embalmer-funeral directors. Resident deaths in Massachusetts have remained at about 57,000 per year since 1917, a number which, theoretically provides only 1.15 deaths per funeral establishment per week. One may say in justification of the multiplicity of establishments that it provides a neighborhood service, often seen in the form of a funeral parlor which is directly across the street from a church. A new phenomenon, however, is the national chain, which has taken over the operation of some of the largest funeral businesses with the deepest roots in the community (example: J. S. Waterman in Boston).

We must remember that funeral practices have become what they are because people have refused to think about the subject and have delegated it to the "funeral profession." We get the funerals that we deserve. When a significant number of people want a different pattern of funeral service, the profession can be counted upon to supply it. One of the memorial societies which has a contract with a funeral director is the People's Memorial Association in Seattle. They have made their contract not to the low bidder, but to a funeral director they have come to know through long and faithful service. The Memorial Society of New England has found a number of funeral directors who have proved to be particularly sympathetic and helpful. They recognize that poor people require economies in relation to funerals as in everything else. They also recognize that many families appreciate the help of a sympathetic knowledgeable person who can carry out a number of additional errands and services. Often, these are "extras" for which there is a legitimate charge.

What can a memorial society do that a clergyman or the family lawyer can't do?

We live in a very mobile society so that for many of us there is no particular individual who can play this role. The cost of joining a memorial society is a single life-time contribution of $5 to $10. For this price, we are getting the experience of a large number of people in relation to these problems. The reciprocity between memorial societies across the country makes it possible to transfer from one to another, usually for about $2. Membership in the Continental Association of Funeral and Memorial Societies provides a newsletter which contains a good deal of information about new statutory laws and other developments that may be of significance to members. Finally, in most instances, clergymen are members of the board of the memorial society. The Memorial Society of New England, for example, is fortunate, indeed, to have the services of the Reverend Francis Caswell, retired headmaster of the Dexter School. Mr. Caswell has given freely of his time in direct service to members, not only over the telephone, but also, upon occasion, accompanying members to a funeral establishment and providing them with quiet support in funeral pre-planning. Like most memorial societies, however, the work of the organization depends on volunteers and consists of information, rather than direct service.

How many people are served by memorial societies?

Only a tiny fraction of the population belongs to a memorial society. The Memorial Society of New England has grown slowly, largely by word of mouth, to a total of about 2,000 members. It has been the experience of most memorial societies that advertising is relatively ineffective, and that credibility gained through the actual experience of members and spread by word of mouth is what makes for growth. The largest memorial society is the one in British Columbia which numbers 66,000 members and offers a single type of service, cremation.

Do memorial societies try to promote cremation?

Most memorial societies have a strong bias toward cremation. In the case of the New England Society, however, this is only one of five types of services which are suggested. There is a good deal of interest in medical use of the body after death, and we try to provide complete and authoritative information. People need to realize, also, that a post mortem examination may be of more value in a particular situation than dissection of the body for the purposes of instruction and gross anatomy.

Do memorial societies believe that there should be no viewing of the body?

Viewing of the body is among the choices offered by the Memorial Society of New England. Grief means coming to realize through a process which is always difficult that someone has, in fact, died. How rapidly should the initial and natural denial of death be dispelled, and how? Is more denial involved in viewing the body, as improved by a cosmetician, or in having a service at which neither corpse nor casket is present? I do not believe that we can prescribe for others in this matter. I do believe that we should discuss it, arrive at our own decisions, and plan accordingly. Educational materials provided by memorial societies can be helpful in arriving at these decisions.

Are memorial societies political action groups?

Most memorial societies are free to engage in political activity. This means that contributions to them are not tax-deductible. Lobbying, however, is a costly operation which is beyond the energies and budgets of most societies. The task of educating and serving society members comes first, and political activity may invite reprisals by the funeral industry against cooperative funeral directors.

How do you find out more about memorial societies?

Write to the Continental Association (address given above) for information, or, if you know the name of a memorial society, look them up in the telephone book and give them a call.

Are there any special educational materials which can be used for groups?

Until I Die is a 30-minute color film produced by WWTW-TV in Chicago. In it Dr. Elizabeth Kübler-Ross explains her work with terminally ill patients. Available from Video Nursing, Inc., 2834 Central St., Evanston, Ill., phone 312-866-6460.

The Great American Funeral is a 55 minute NBC documentary, made in about 1965 but still highly relevant, which discusses all aspects of the funeral industry, including interviews with funeral directors, religious leaders, memorial society leaders and Jessica Mitford. Available (March, 1972) from Mass Media Association, Inc., 1724 Chouteau, St. Louis, Mo. 63104, phone 314-436-0418.

Thoughts on Thanatologists

by Rev. Allan W. Reed

Protestant Chaplain and
Supervisor, School of
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Twelve years ago, I came to Boston and MGH as Protestant chaplain — a mid-western minister with six years' parish experience, a graduate degree in counseling, three years' clinical work at the University of Michigan Medical Center, and a resolve that I was not going to try to change either Boston or MGH.

That resolve was a help; many things were different here. In Ohio and Michigan, I would spend the entire morning with the family of a parishioner undergoing serious surgery. In Boston, relatives were urged not to come to the hospital, since there was "nothing they could do." In my previous hospitals, patients sometimes "died." Here, they were discharged to "Allen Street." I soon discovered, however, that the morgue was no longer in the Allen Street House, that the Allen Street House had been torn down, that Allen Street had been renamed Blossom Street! (Remember that early sepia movie "Blossom Time" with the closing scene in which the heroine climbs the stairway to the sky with her long deceased lover, Nelson Eddy? This scene comes to mind every time I cross Allen/Blossom Street.)

Well, the floor secretaries wrote "ASH" on the patient cards without realizing the irony of that abbreviation. Some of them would refuse to say "died" to me, preferring to report that a patient had been discharged to Allen Street. However, in the same hospital, Avery Weisman and Thomas Hackett were actually studying dying people — going to the source of original information, the patients themselves. Much of the literature up to the late fifties dealt with death once removed, but Avery and Tom were willing to go to the bed of dying human beings, stick with them through the suffering or glory, listen to the unspoken feelings as well as the verbal rituals, and then, try to present their experiences and insights to their "scientific" colleagues.

This effort of presenting their findings and suggestions to fellow physicians must have been something like discussing the Edsel with the Ford family, for these dying patients were the "failures" of modern technological medicine.

I came to know Avery and Tom very well. Their humane, respectful, catholic (though sometimes, I thought, limited for the sake of scientific respectability), and insightful approach to the fact that we die supported me as I learned to live in a culture where dying was unpopular and dying people were uncooperative. Oliver Cope represented a generation just past that had other humane practitioners in it too, and I count myself fortunate to know him. Such men worked in the face of resistance as they followed Erich Lindemann's earlier approach of going to the people most involved: the grieving for Lindemann, the dying for Weisman and Hackett.

This modern, technological, and secular world was one of split personalities: a surgeon could be very empathic with a patient who was dying of a disease he did not have to treat; yet, when asked about his own specialty, he could become a cold and apparently unfeeling automaton. House officers and senior staff could be very unwilling to face the fact of death in their patients (there was even some table pounding at one meeting over this), but when a fellow staff member died, they realized that they needed a chaplain for facilitating their grief work and conducting a memorial service.

Long before "thanatology" became popular, Avery and Tom were fighting it out with their own inner resistances, their medical students, and their peers in order to bring the fact of death into respected notice. Avery even put to rest the much quoted "opinion" of Osler's that dying people usually become very calm and accepting before death. Avery discovered, from the original notes, that Osler had drawn his conclusion on the basis of very skimpy records made on about 90 patients by almost as many house officers. House officers are not especially able to judge what psychic stress dying patients are undergoing!

Other Harvard Medical School teachers are involved now. John Noble is known as a sensitive, capable and respected physician. He is trying to deal constructively with a former "county" hospital. Bill Worden has recently come to work with Avery, and he brings a broad view of life and death and meaning to the scene. Ned Cassem is teaching seminarians at Youville Hospital and staff at MGH trying to set in some order the factors which tie us up in the face of death and dying.

Many Boston hospitals (Harvard and non-Harvard) are attempting to treat dying more naturally now. The attempts at Tufts seem to be reaching medical students best. They talk to me about individual people who have been born, suffered, rejoiced, died — their own people, not cases. Schools of nursing are also struggling. The nurse clinicians at MGH represent a powerful force for facing reality as they teach and offer supportive guidance to groups and individuals on the nursing staff. Chaplain residents often provide leadership on the hospital floors in setting up staff discussions of terminal patients. Certainly, the "thanatologists" of Harvard Medical School have helped — no one can see the respect and concern that Weisman and others have for the dying without feeling that some attempt to grow in grace and facility with the dying must be made.

"Thanatology" now is almost a fad, and I am becoming suspicious of it. My impression is that much of the "thanatology" that is going on across the country is counter-phobic. No harm in this. But I have seen and heard of nurses, physicians, ministers, and social workers going around trying to fit their patients into Kübler-Ross's five stages; I see them eagerly offering help in the form of information statistics, the latest sociological observations of a surgical floor, or an ethics professor's pronouncements on the state of modern man. Living and dying isn't that easy! I'd like to see fewer courses and lectures (including my own) and see more painful waits beside the bed, more agonizing silences in the waiting room — followed by sustained introspection and group sharing of the feelings brought to awareness by such attention to the death that is around us.

Sculpture depicting old age.

As a minister in our secular society, and a chaplain in a particular microcosm of that secular society called the hospital, I recognize that anyone in trying circumstances, in hectic crises, in the beginning stages of a profession may be narrow-minded, nervous, and anxious as he or she competes in the rat race of academic and clinical training, working towards the time when he or she can *be* someone. But in spite of this understandable situation, medical students, seminarians, house officers, chaplain residents, social workers, nurses — any of the great "helpers" — will need to experience more than an informational input, more than a statistical survey. John Dorsey of Wayne State University might say "Every man his own Thanatologist!" The people whose work I have written about here certainly would agree, and are helping all of us struggle towards that goal.

Mortality Among Physicians: A Cohort Study

by **David C. Poskanzer '54**
Robert S. Munford '70
Sankey V. Williams '70
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The belief that physicians, presumably because of their long hours of work under stressful conditions, have a life expectancy shorter than that of the general population has long been held in the medical community. The present study, which describes the mortality experience of medical school graduates from the time of graduation to the present, suggests that the opposite is true.

Three studies of physician mortality in this country, using data from the files of the American Medical Association, have examined physician deaths which occurred in 1925, 1938-42, and 1949-51.[1-3] Two of these studies suggested that after adjustment for age, physician life span was considerably longer than that of comparable groups of white males. However, in one analysis of deaths occurring between 1938-42, physician mortality was about the same as that of white males in the general population.[2] No studies of physician mortality have been published since that of the 1949-51 population, and, to our knowledge, there has never been a cohort analysis of physician mortality.

In the present study, the mortality experience of medical school graduates is compared with that of cohorts of the United States white male population, and with the mortality of American physicians as derived from data provided in the three studies mentioned above.[1-3] The mortality experience of these graduates is also examined according to specialty group.

Methods

The dates of birth and death of all members of the 9 classes graduated from Harvard Medical School in the years 1923-24, 1932-34 and 1942-44 were obtained from records at the School's Alumni Office. Two classes were graduated in 1943 in an accelerated program and both were included in the study. All known deaths prior to January 1, 1970 were recorded. The information in these records is based on several solicitations of the alumni each year for contributions, a major effort made every five years to obtain information for class reunions, and the extensive personal knowledge of the Alumni Office staff. In addition, two national clipping services provide the office with information from local newspapers about graduates.

Each graduate was assigned to a specialty practice based on his own description of his practice. These details were obtained from the most recent reunion bulletin or, in the few cases when this information was not available, from the most recent directory of the American Medical Association. For those graduates who died prior to the initiation of the reunion bulletins in 1957, specialty information was obtained from the AMA Directory published just prior to the graduate's death.

Comparison with white males

For comparison, the mortality experience of the general population was obtained from the abridged life tables for white males as they appear in U.S. Vital Statistics Reports.[4] These are stationary life tables which give, for a hypothetical population of 100,000 infants born alive, the number of survivors at five-year intervals from birth, under the assumption that the mortality rates of that time period prevail. The appropriate comparison for the graduates would be a cohort life table for U.S. white males, but, to our knowledge, such a table does not exist. Data from the stationary life table closest in time to the period of concern was used. For example, with the 1932-34 graduates, the U.S. white male comparison utilized the 1929-31 table for the first five years of follow up, the 1939-41 table for the five to 15 year follow up, the 1949-51 table for the 15 to 25 year follow up, etc. Cohort white male population life tables were thus approximated, and several such tables were generated to correspond with the age distribution of each group of graduates. For example, with the 1932-34 graduates five cohort population life tables were calculated for white males to correspond with ages 20-24, 25-29, 30-34, 35-39 and 40-44 in 1932-34. Finally, the white male population figures in Table 1 represent a weighted average, with the weights proportional to the age distribution of the Harvard graduates. For example, there were 342 or 85.7 per cent of the 1932-34 graduates who were 25-29 years old at graduation (Table 2). Hence, the corresponding cohort population life table receives a weight of 85.7 per cent in arriving at the white male population figure.

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Comparison with other physicians

In order to compare the mortality experience of the chosen groups of graduates with that of other physicians, age-specific mortality rates for physicians in this country in the years 1925, 1938-42, and 1949-51 were obtained from previously published studies.[1-3] Using these rates, abridged life tables for physicians were calculated, according to the revised method described by the National Center for Health Statistics.[5] Cohort physician life tables were then assembled, using the method described above, and compared with the graduates.

Comparison among specialties

Because specialty plans, in many instances, are not consolidated for some time after graduation, the starting point for calculations comparing mortality among specialties was arbitrarily set at five years following graduation from medical school. When death occurred prior to this time, assignment of specialty usually could not be made.

Results

The classes from the three successive decades form three cohorts of varying age distribution who graduated roughly ten years apart. There were no women graduates from this medical school until 1949, and less than one percent of the graduates in this study could be identified as non-white. Of the 1,193 graduates in the study, there were only six for whom a satisfactory assignment of specialty practice could not be made. Specialty percentage distributions are presented in Table 3.

Table 1. Cumulative Mortality of Medical School Graduates and U.S. White Males at Comparable Ages

Years after graduation	Cumulative Per Cent Mortality					
	Classes 1923-24	U.S. White males	Classes 1932-34	U.S. White males	Classes 1942-44	U.S. White males
	N = 248		N = 399		N = 546	
5	2.0	2.6	0.8	1.9	0.6	1.2
10	4.4	4.8	2.5	3.4	1.1	2.2*
15	6.9	7.5	4.0	5.4	1.7	3.5**
20	8.1	10.3	5.8	7.7	2.4	5.3**
25	9.7	14.4*	8.0	11.2*	4.9	8.2***
30	14.9	19.5*	12.0	16.2**	—	—
35	23.4	26.8	17.8	23.3**	—	—
40	29.0	36.1*	—	—	—	—
45	40.7	47.6*	—	—	—	—

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

Tests of significance utilized the normal approximation to the binomial distribution.

Table 2. Age Distribution of Medical School Classes at Graduation

	Classes 1923-24	Classes 1932-34	Classes 1942-44
Number of graduates	248	399	546
	Per Cent Distribution		
Age at graduation (years)			
20-24	12.9	9.3	29.7
25-29	75.0	85.7	67.8
30-34	11.3	4.3	2.5
35+	0.8	0.7	—
Total	100.0	100.0	100.0

Table 3. Distribution by Field of Practice of Medical School Graduates

Field of practice	Per Cent Distribution 1923-24	1932-34	1942-44
Internal medicine	23.0	23.5	24.7
Pediatrics	4.8	6.3	5.7
Psychiatry/Neurology	3.2	4.0	7.7
Dermatology	0.4	1.0	1.1
Subtotal, medical	31.4	34.8	39.1
General surgery	27.0	25.3	21.6
Obstetrics/Gynecology	8.1	7.0	3.5
Orthopedics	1.6	4.5	3.5
Other surgical*	5.6	7.3	10.1
Subtotal, surgical	42.4	44.1	38.7
General practice	8.9	8.3	2.2
Other and not in practice**	17.3	12.8	20.0
	100.0	100.0	100.0

* Includes thoracic surgery, neurosurgery, plastic surgery, urology, colon and rectal surgery and otolaryngology.

** Includes radiology, pathology, ophthalmology, anesthesiology, physical medicine, preventive medicine, legal medicine, basic science, administration and extra-medical.

The cumulative mortality of the three groups of graduates is plotted in Figure 1 for comparison with their respective white male cohorts. There are no major alterations in the mortality experience of these groups that can be associated with an identifiable historical event such as World War II.

When the cumulative mortalities of the three groups of graduates are compared with those of the U.S. white males (Table 1), the graduates have significantly fewer deaths except in the initial years after graduation.* As an example, the data for the graduates in the classes 1942-44 and their comparison cohorts of white males have been graphed in Figure 2.

* Of those graduates who died within five years of graduation, two were killed in World War II, one died of drowning, five died of illness and one was a probable suicide.

In comparing the cumulative mortalities of the three groups of graduates with each other (Fig. 3), it is apparent that each successive group has had fewer deaths at a comparable time after graduation than the group graduating in the preceding decade. The mean age at graduation has become steadily lower, 26.8, 26.1 and 24.8, respectively** and partially explains the improvement in mortality experience over these two decades. However, the improved mortality experience of the graduates also reflects an improvement in the mortality experience of the general white male population during this period. No differences could be demonstrated between the improvement in mortality among the groups of medical school graduates and that experienced by the general white male population.

** The downward linear trend in age is highly significant (slope = 0.8 years per decade, $p < 0.001$).

Comparison with other physicians

There were no significant differences between the mortality rates of the general American physician population and those of the medical graduates of 1923-24 and 1932-34. A similar comparison could not be performed on the group graduated in 1942-44, because the only subsequent data on general physician mortality experience, for the period 1949-51, provide only one point on a comparison curve.

Specialty groups

Almost all of the graduates in this study entered a specialty practice. Of the graduates in the 20's and 30's, 91.5 percent entered a specialty; of the group graduated in the period 1942-44, 97.8 percent became specialists. It is a remarkably constant finding that for each class in the study one quarter of the graduates now practice general surgery and one quarter specialize in internal medicine. Every major specialty group is represented. An effort was made to identify those specialties that might conceivably affect the longevity of the practitioner. Significant differences among the individual specialties were not apparent, possibly because the sample was too small. Medical specialties included dermatology, internal medicine, pediatrics and psychiatry and neurology. They were compared with the surgical specialties which included colon and rectal surgery, otolaryngology, plastic surgery, thoracic surgery, and urology. Anesthesiology, general practice, ophthalmology, radiology, pathology, and other specialties were not classified as either medical or surgical. Comparison of the mortality rates of medical and surgical specialists who graduated in the years 1923-24 and 1932-34 revealed that the medical specialists had a significantly higher mortality than the surgical specialists ($p < 0.05$) (Fig. 4) about fifteen to twenty-five years after graduation. The

mean ages of these 2 groups at the time of their graduation were identical. Beyond twenty-five years after graduation there does not appear to be any difference between the two groups. No significant difference in cumulative mortality was found between the medical specialists and the surgical specialists who graduated in the years 1942-44.

Discussion

Previous studies of physician mortality[1-3] have employed the cross-sectional approach, in which all physician deaths occurring during a specified time interval are analyzed. The cohort method, which we have used in the present analysis, allows one to determine the cumulative mortality experienced by a group as its members age together, and to compare this with the mortality experienced by control groups. The identification of developing mortality trends is thus facilitated. The cross-sectional study suffers from its inability to follow a group whose members share common experiences. It has the advantage of providing an approximation of life expectancy because death rates in all age groups can be determined. In the cohort method life expectancy can be measured only after the entire cohort is deceased.

Three cohorts of medical school graduates have a cumulative mortality which is consistently less than that of comparable groups of white males. That physicians have a longer life span than white males in general has been confirmed in two previous studies of physician mortality done by the cross-sectional method.[1,3] A study including white and non-white physicians, who died between 1938-42, revealed that physicians had almost the same overall mortality as white males in the general population.[2] The inclusion of non-whites in that study may have accounted for the higher

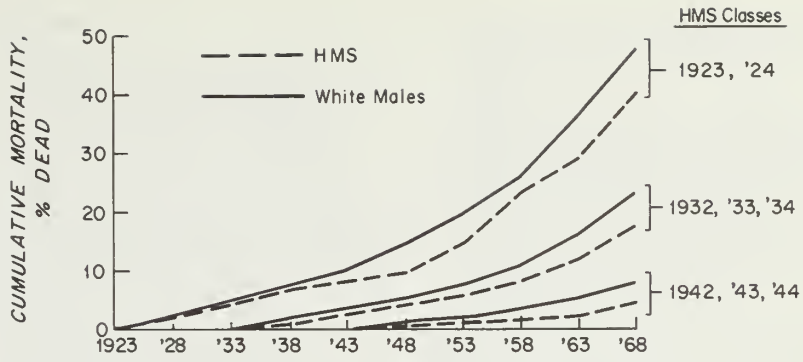

Figure 1. Cumulative mortality of the three groups of medical school graduates as compared with their respective cohorts of white males.

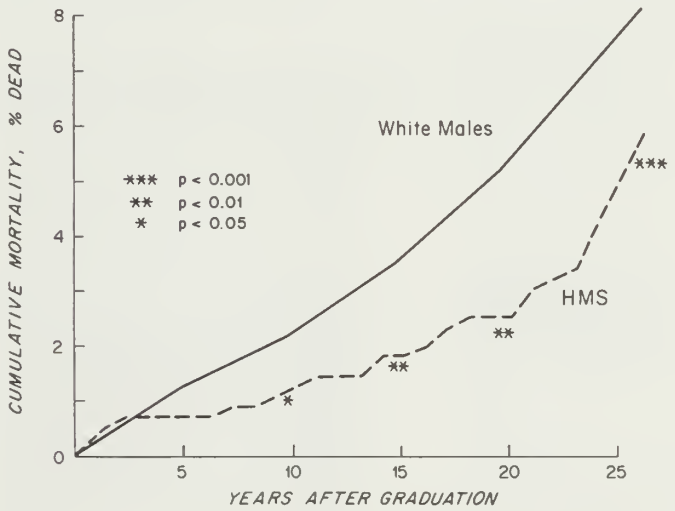

Figure 2. Comparison of cumulative mortality among medical school graduates of 1942-44 and comparable cohorts of white males.

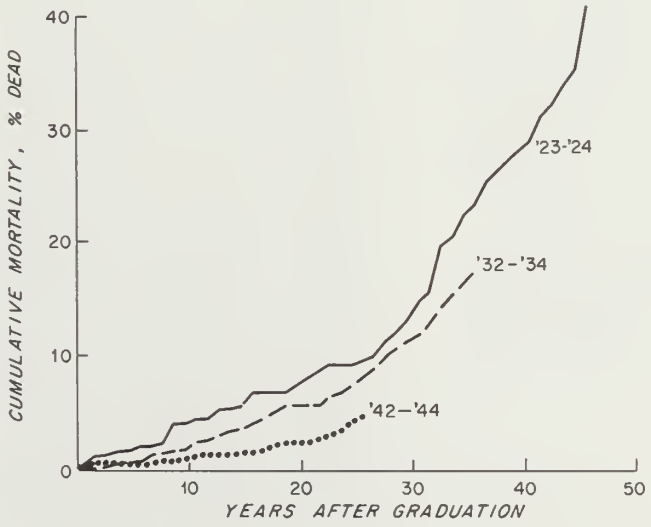

Figure 3. Cumulative mortalities of the three groups of graduates are compared with each other.

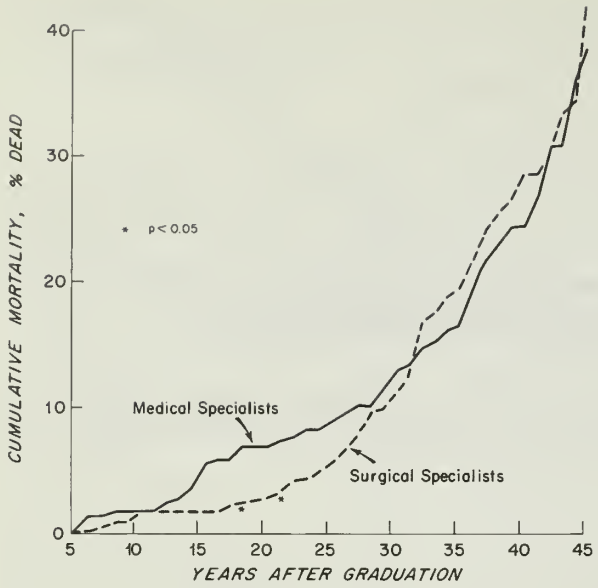

Figure 4. Comparison of mortality rates of medical and surgical specialists who graduated in the years 1923-24 and 1932-34.

physician mortality, as non-white physicians may experience the relatively higher mortality that other non-whites do.

We suggest that improved physician survival can be attributed to the highly selective process which admits primarily healthy individuals from the middle and upper socioeconomic classes to the medical profession. The extended, competitive academic training that precedes the M.D. degree effectively prevents many of those who are economically deprived or in poor health from becoming physicians. As students in college and medical school, physicians probably receive better care than the general population because of health care programs administered by most institutions of higher learning. When he becomes a member of the medical profession, the physician has, in addition, easy access to the effective therapeutic measures which his profession can offer. It is not clear, however, that the physician himself benefits to a greater degree than the general population from competent medical care. Physicians by reputation are difficult patients to manage and often postpone seeking medical help until long past the time when they should have recognized the need for it.

It is popularly believed that medicine as a profession makes significant physical and emotional demands on the physician and that this results in a shortening of his life span. The present study and previous studies[1,3] demonstrate, however, that physicians live longer than other groups. Moreover, physicians as a group work more weeks in a year and more hours in each week than other professional groups. Data from the 1960 Census of the U.S. population showed that physicians and surgeons worked 48.2 weeks during the year, while all professionals worked an average 44.5 weeks.[6] Office-oriented physicians, who responded to a questionnaire, indicated that they practiced 47.9 weeks in the year 1965.[7] U.S. Census data for 1960 showed that "physicians and surgeons" practiced an average of 54.5 hours in each week, while the average number of hours worked by all professionals in the same year was 40.4.[6] In 1965, office-oriented physicians estimated they practiced 55.8 hours in the week preceding the questionnaire.[7] Physicians and surgeons had mortality rates slightly in excess of professional, technical and kindred workers in 1950,[8] but they had slightly lower rates than "all occupations" in the same year. As far as we are aware, these are the only data on physician mortality which allow a direct comparison with mortality in other professional groups in this country, although King[9] has recently presented a review of the mortality of professional groups.

Causes of death

Except in a few cases, it was not possible to determine the cause of death in the present study. In previous studies, however, the leading cause of death in the physician population has been diseases of the heart, particularly coronary-artery disease. In the study of the 1949-51 physician population, diseases of the heart accounted for 49.0 percent of the total deaths.[3] Previous studies have shown, in addition, that death from heart disease is more common in the physician population than in control populations of white males.[1-3] In addition to diseases of the heart, diabetes mellitus and suicide are more common as causes of death among physicians than among control groups.[3] Malignant neoplasms, cerebrovascular disease and accidents follow as major causes of death among physicians, although they are no more common among physicians than among other groups.[3] The apparent increased frequency of death from diabetes mellitus may be the result of more accurate diagnosis among physicians, especially since it has been suggested that physicians with diabetes live longer than others with the disease.[3] Suicide is somewhat more common among physicians than in the population in general and accounts for between one and three percent of the total number of physician deaths.[1-3,10,11]

Specialties

In the present study, medical specialists who graduated in the years 1923-24 and 1932-34 appeared to die earlier in their careers than did their classmates who went into the surgical specialties. One possible explanation for this difference is self selection by the young physician embarking on his career. The physician's concepts of the demands and rigors of surgical versus medical specialty may be such that the more hearty and physically fit tend to cluster in the surgical specialties.

The single previous comprehensive study on physician mortality by specialty was based on the 1938-42 physician population and concluded that specialists in general have lower mortality rates than non-specialists.[12] Despite the fact that the present study was limited almost exclusively to specialists, this factor alone cannot account for the improved mortality in the study group, since no difference could be demonstrated when the study group was compared with the total population of physicians. Radiologists as a group have been found to have an increased mortality from all causes, but especially from cancer and the cardiovascular-renal diseases, both perhaps associated with an occupational exposure to ionizing radiation.[13] There is no increase in mortality from any cause for radiologists who entered the specialty after 1940, suggesting that the initial hazards associated with the specialty have been controlled and probably eliminated.

Although physicians begin their careers later than comparable groups, they also retire later than these groups, regaining in part the years of activity they had lost. In the period 1958 to 1960 the average length of a medical career starting at age twenty-eight (41 years) was roughly comparable with the expected length of working life for eighteen-year-old U.S. males (43 years). The extra years resulting from the physician's improved longevity are not entirely spent in retirement,[14] a fact of importance in estimating future medical manpower resources.

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Book Review

by Robert Coles, M.D.

On Dying and Denying, by Avery D. Weisman, New York: Behavioral Publications, 1972. pp. 247.

When Sigmund Freud decided to pay so much attention to the Viennese men and women we now think of as "neurotic," he was approaching patients ignored, scorned, badly manipulated or mistreated by their doctors. His colleagues later on would take violent issue with him, but he had broken with them well before he ever came up with his first theoretical formulation, let alone wrote *The Interpretation of Dreams*. His willingness to learn from people hitherto treated as outcasts, hence at best with the kind of exploitative condescension even the craziest rich person can obtain, was in itself a revolutionary gesture. Forsaking magic, postures of omnipotence, rhetoric, drugs or electricity, he merely used his eyes and ears, not to mention a formidable intelligence which enabled him to make sense out of apparent contradictions or ambiguities. Moreover, he dared put himself on the line; what those peculiar and vexing patients talked about and dreamed of, he began to acknowledge, reminded him in certain respects of his own struggles as a human being. Ambitious and generally quite sure of himself, he was also a modest and generous man, never inclined to make pronouncements about others, then scurry toward his shelter: the all-knowing doctor or theorist who is immune from what he diagnoses in others.

That clinical attitude of Freud's is one of his many contributions to contemporary psychiatry, and it is an attitude very much in existence as one goes through Avery Weisman's impressive and moving *On Dying and Denying*. For years now Dr. Weisman and Dr. Thomas P. Hackett, both of the Massachusetts General Hospital, have been writing articles and monographs meant to help their colleagues in the difficult task of understanding how it is that the sick come to psychological terms with death. Like Freud, they have spent a lot of time talking with people not often given much attention — certainly not the kind those two doctors have offered. No doubt upon occasion they have not been greeted warmly on wards where doctors and dying patients have arrived at their own, sad ways of avoiding or deceiving one another. No doubt their writings have stirred resentment or worse among those who want no part of what can be offered by sensitive and thoughtful psychiatrists, free of jargon and that annoying arrogance which accompanies a feeling of uncertainty or inadequacy. No doubt some doctors simply don't want any interference from outsiders; they have come upon a manner of facing death in those they treat, and feel that for themselves there is no other alternative.

Yet one senses that the medical profession as a whole is now, at last, beginning to listen as never before to doctors like Avery Weisman and Thomas Hackett or Chicago's Elizabeth Kübler-Ross. Perhaps doctors in recent years have proven themselves able to accomplish so very much, and therefore no longer have to take refuge in assertions of invincibility, or run from the threat of failure which a patient's death can provoke in those who take care of him or her. Perhaps, too, as doctors find themselves working with a progressively older population of patients, enabled to survive diseases once fatal, a more philosophical or introspective inclination naturally comes about. It is one thing to be fighting epidemic diseases that in a flash kill the young, and quite another to see in large numbers people who have lived long and generally comfortable lives (at least, in this country, more comfortable lives than most people in other centuries or nations have known) and who themselves have had the time and leisure to become somewhat resigned or philosophical about death. Not that rich, old, retired people are any less prone to the maneuvers of mind Dr. Weisman describes, and better, illustrates so vividly and unforgettably with his clinical case-histories, which amount to the major portion of the book — and that in itself is an exemplary contribution from a member of a profession which has, perhaps, relied too heavily on theory. We all face a last struggle; whether doctors or patients we apprehend what we don't especially like, however resigned we are to the inevitable. Some are more panicky than others. Some less self-centered than others, hence better able to find a kind of wry detachment. Most important, some are lucky enough to have considerate doctors, professional men and women who not only know how to administer medicine wisely or

recommend surgery appropriately, after having made a correct diagnosis, but also know how to respond to the equally important task of standing loyally and honestly at the side of a person who has a right to say goodbye with dignity and self-respect.

We are shown in this book how that dignity is lost; how the human weaknesses we all possess are more than taken advantage of — and it is not only the actions of particularly cold or indifferent physicians that Dr. Weisman wants to critize, but a wide range of more institutionalized practices. He remarks upon an extraordinary irony: a profession so intimately in touch with death has failed to help its students feel comfortable in dealing with the psychological subtleties, the shifts and turns that cumulatively become so important in those last moments of life. He is no self-righteous moralist, however; he sees things not being done as well as they might be, but his purpose is not to scold, or do the same more indirectly by throwing around psychiatric labels at patients and doctors alike. In prose that is clear and never pompous he sets forth the nature of his research, the numbers and kinds of patients he and Dr. Hackett have seen over the past decade or so, the struggles *they* have had, never mind other doctors, to keep their wits about them — give in neither to despair or a kind of sympathetic attachment that blurs vision, and often enough denies the patient, confused and fearful, the kind of clear-headedness he or she desparately wants and needs. We are allowed to meet at some length the particular individuals who in their final hours have taught the author so much. We are then told what he has learned and believes worth emphasizing — nothing doctrinaire, no set rules, no over-wrought theories, really an approach, a way of seeing that hopefully will provide for more and more doctors a way of working, a manner of coming into contact with not only individual patients, but that last, fateful phenomenon which has challenged philosophers and theologians, but just as much, presents itself to every single one of us as the ultimate hurdle.

The book is rich not only with clinical observations, but open-minded psychological discussion. For a long time Dr. Weisman has wanted to help free his profession of psychoanalytic psychiatry from some of its more mechanistic and dogmatic inclinations, so rightly bothersome to those other branches of medicine, and also so unworthy of Freud's ability to change his mind again, and even see the day when his ideas would be supplanted by new discoveries in biology and

neurophysiology. The word "denying" is not used in that static and often enough perjorative way those "defense mechanisms" are sometimes called upon — so as to fix for good one or another person's mental life. Anyone who wants to see what a sensible and wise psychoanalyst, free of cant and narrowness, can do with nis profession's knowledge ought read not only this book but Dr. Weisman's fine companion to it, *The Existential Core of Psychoanalysis*. In both books stress is given to the range and diversity of the mind's psychological processes. The point, for example, is not to fasten psychological words on a dying patient, or the doctor in charge, either. Yes, we all "deny," even those who use the word to characterize others. Psychological analysis, in some hands, can be yet another way of ignoring life's inherent ironies and contradictions; everything that is so various or unique about people, even when faced with death from the same disease at the same age in the same hospital at a given moment in medical history, is fitted into the straight-jacket of those wordy generalizations which, alas, have plagued the social sciences. This book provides a refreshing contrast with all of that. Dr. Weisman is under no compulsion to catch everything around and tuck it into his particular presentation. He is well grounded in both medicine and philosophy as well as his own field's knowledge. He can suggest some valuable questions for doctors to ask themselves as they contend with the reality of death in the presence of a patient, and then say: "I do not know the answers to these questions, except my own. I do know that to answer these questions requires the starkest self-examination, and there can be no genuine consensus."

The words, the tone, the approach to the reader and indeed to life itself, is again worthy of comparison with Freud's. Like the founder of psychoanalysis, Dr. Weisman is a stoic, anxious to stare unflinchingly at what others shun, turn away from fear or with foolish bravado. On the other hand, he is not moody or gloomy — and intent on cloaking such a disposition in a "frame of reference." He wants for each of us a dignity at the end very much in keeping with what we have tried to find all along, from year to year, during the healthier, less burdensome time of our lives. He wants us to leave as free from pain as possible, and with a measure of pride — that this final challenge, too, can be faced. At the age of 80, Sigmund Freud was in the last phase of his long and exhausting struggle with cancer. In Max Schur's *Freud: Living and Dying* one comes across this comment of his, written to a poet-friend: "Life at my age is not easy, but spring is beautiful and so is love." Avery Weisman would not call that evidence of "denial," or a "manic" upsurge in the face of depression, or a "reaction-formation," or a self-deluding bit of sentimentality. He would find that blend of calm acceptance and unimpaired responsiveness to life's possibilities something to be admired — and enabled in others similarly at the edge of death, yet alive enough to know what they value and how they want to bear themselves to the end.

Semester of Discontent

by Samuel Z. Goldhaber '76

As the national competition for medical school admissions approaches three applicants for every seat, it is natural to wonder what sort of student is being accepted into medical school. There were 3,080 applicants for our class of 165 students. A statistical evaluation of our credentials reveals a 3.76 grade point average for science courses and an average MCAT score of 641. These facts may be of interest but they do not go very far in explaining motivation, thoughts about medicine and science, or the type of student who will graduate from HMS in 1976. To begin uncovering the ideas and ideals of our class, in-depth interviews with three very different students follow.

Jaime H. Rivera

"I never believed I could go into medicine because no one told me I could do anything except become an auto mechanic. My education was oriented toward vocation. The hassle was that after vocational schools, the unions wouldn't take you and, therefore, there were no jobs."

Jaime H. Rivera was born in Puerto Rico and moved to the South Bronx when he was seven years old. He didn't speak any English when he arrived in New York. "Nobody in my neighborhood had positive experiences with medicine. You'd go to the emergency room and have a four-hour wait. I've taken my mother to the hospital and she's never seen the same doctor twice. Before Medicaid, there were no doctors in the community. Then, the Medicaid pimps came into the neighborhood. These doctors go into the community, work so many hours, and then leave. To me, delivering health care means going back to the community, understanding its problems because you've lived through them, and not being servile to some institution or corporation.

"A hysterectomy is done in the South Bronx as a matter of course. Go in with a small vaginal problem, and if you're not careful, you come out minus a uterus. HMO's in New York are ineffective because they're located outside the communities. If you want emergency care over the weekend, you have to run to a doctor who is there to zap you in and zap you out. The hospital corporation that administers the New York hospitals knows nothing about communities. I don't think they ever get around to the people they serve. They never get to see beyond their paper work."

Rivera went to a vocational high school where he "mostly played handball and got training as an aircraft mechanic." He called high school "a system that doesn't give you any self-confidence or hope." In spite of this, he was admitted to City College of New York, where he majored in biology. In the spring of his freshman year, Rivera was part of a group of a few hundred students who took over five buildings on the South Campus. "Our people couldn't get into college because the system was so oppressive. Our action came from a political feeling that our people were being kept out of college because of racist standards. We were undergoing a total lack of preparation in high schools." The result of the takeover was an open admissions policy at CCNY.

During his junior and senior years in college, Rivera worked part time as a case aid. The first year, he was assigned to the pediatric social service at Fordham Hospital, one of the two municipal hospitals in the South Bronx. His job involved contacting mothers whose children had positive lead tests, placing physically handicapped children in special schools, and tracing down parents who did not keep their appointments. The second year, he worked on a pilot community mental health program with a team of psychiatrists and psychologists. "Two days a week, people could walk in and rap about their problems. I wasn't there long enough to see the results, but the program is still going on." In addition, Rivera was a reporter and photographer for the Third World newspaper at CCNY and became news editor his senior year.

The summers after freshman and sophomore years found Rivera working for the New York City Youth Board, "setting up block parties, booking bands, and keeping everybody cool." After junior and senior years, he did construction work as a member of the electrical union. "The reason I got in," he explained, "is that I knew somebody white who put me down as his nephew."

"I must have applied to at least 25 medical schools," Rivera said. "They all impressed me as being very elitist. When I came here for

interviews, I was led to believe you could tailor the curriculum to your needs. In fact, you can tailor your curriculum only if you want to be an academician or go into research. If you want to go out to deliver health care, there's no way for you to train to do that."

To fill this gap, Rivera is active in the Third World Caucus, which has been lobbying with some apparent success for the establishment of a bio-social curriculum. Like the Harvard-MIT program for those with especially strong science backgrounds, the proposed bio-social curriculum would offer another track for those especially interested in health care delivery. "I'm optimistic about the commitment Dean Ebert has made toward establishing this new curriculum."

Rivera complained that HMS instills us with the attitude that "to stitch up someone's head is below us; that we should aim for something higher." He complained that in the current core curriculum, which has no real course in medical sociology or medical economics, "people who want to deliver primary care are discouraged from doing that."

Except for the impending bio-social curriculum, Rivera said his reaction to HMS has been "very negative. I like science as much as the next guy. But I was hoping to apply that science to people much sooner."

Rivera criticized Third World students who are separatists and said, "They must further develop their political consciousness. Third World people are naturally defensive because they've been repressed for many years and see the institution as ramming a foreign ideology down their throats. Most white students don't know the feeling of taking one step forward and being taken two steps backwards. But communication, I think, is the most important thing."

Dean H. Hamer

"I had mostly C's and D's until senior year in high school, when I became interested in medicine and science. Only a minority of students in my high school were academically oriented, and the counseling wasn't superb. I was advised I'd be very lucky to get into a junior college."

Dean H. Hamer put aside glassware, cylinders of nitrogen, and radioactive samples one Saturday afternoon to recount high school life in Montclair, New Jersey, and his college experience at Trinity. Working in the labs of Charles A. Thomas, Jr., professor of biological chemistry at HMS, Hamer has had more success than with his first research venture as a high school senior, when one of his "male" mice became pregnant.

"Because my high school record was so weird, with all A's suddenly in senior year, I applied to a lot of colleges. I wanted to go to a fairly small liberal arts college and Trinity was the best school I got into." At Trinity, Hamer received three Advanced Placement credits and decided to complete college in three years. The summer after his second year he was selected for a ten-week NSF-sponsored program at the Jackson Labs in Bar Harbor, Maine. At the Labs, famed for the five million mice bred each year and the two million kept on hand, Hamer worked in a cancer lab with tumor viruses. The summer research resulted in his first publication. "Since that summer, I've been interested in oncology — an area of medicine where molecular biology is most likely to become applicable.

"During my third year at Trinity, I was doing research with my biochemistry professor. It was my own research and my own idea — to isolate mitochondrial RNA polymerase from a mammal. I had some successes but not good enough to publish. I was also assistant teaching lab work for the biochemistry course I had just taken. I helped make up the tests and gave a lecture on the molecular biological mechanisms of hormone action." After graduating, Hamer accepted an invitation to return to Bar Harbor last summer for three months, where he studied reverse transcriptases in transformed mouse cells.

Despite an intensive academic schedule at Trinity, Hamer found time to play squash on the freshman team. During his second year of college, he did not stay with the squash team but instead started playing a lot of bridge, accumulating eight or nine Master's points. He also acted in several plays, including *Journey Home* by Dylan Thomas.

Lab work challenges Dean Hamer.

Hamer applied to eight medical schools that had Medical Scientist Training Programs. These programs provided financial support for a six-year course of study leading to an M.D. and a Ph.D. degree. "I was under the impression that Harvard had no M.D.-Ph.D. program, so I didn't apply."

At the same time, Irving H. Goldberg, professor of medicine and Trinity College alumnus, was wondering why no Trinity students had come to HMS in the past four or five years. He began his own recruitment campaign and informed Hamer that Harvard was starting an M.D.-Ph.D. program. Hamer submitted his application one week past the official deadline and arrived 90 minutes late for his first interview at MGH (although he had arrived promptly at Building A). "When I was asked why I didn't write my essay, which I had overlooked in the rush to complete the application, I thought for a moment and said I felt it was much more meaningful to talk in person." Besides a late and incomplete application, HMS did not receive Hamer's MCAT scores until after he received his acceptance letter.

At HMS, Hamer placed out of the biochemistry and microbiology courses. For electives, he chose a course on DNA structure and metabolism taught by Charles C. Richardson, professor of biological chemistry. In addition, he took a reading course with Thomas on molecular cytogenetics and is doing research in Thomas's lab. "We are using restriction endonucleases — DNAses cutting in very specific sites — to probe into the structure of the eukaryotic genome. These are the first DNAses which cleave DNA in specific sites. A large part of the reason we couldn't sequence DNA, as opposed to RNA, was because site-specific nucleases weren't available." The lab group's eventual goal is "to isolate a single eukaryotic gene or chromomere. Only one real gene has been isolated to date — Beckwith's lac operon."

Hamer envisions himself in "a large, university-affiliated hospital or an associate lab doing research in molecular genetics of eukaryotic cells." He foresees "practicing and teaching oncology." His rationale for getting a Ph.D. is "to take many graduate-type courses, such as one on the physical chemistry of polymers in solution."

In regard to the HMS experience so far, Hamer said, "I've been very disappointed in the quality of the core curriculum. It's been atrocious. The science part has not been taught rigorously enough and the social medicine course has been pretty half-assed. In clinical training, my tutorial has been excellent, far better than the basic science core, which is surprising to me since I have a strong predilection to basic science. As a result of condescension to medical students because they are 'only medical students,' the basic science faculty does not teach the sciences very well. In physiology, passive electrical properties were taught with the idea that medical students couldn't understand partial and differential equations. There were a lot of different lecturers, and the courses were poorly organized. Some excessively overlapped others, and others presumed too much knowledge in a given field. The basic science and clinical people should have more contact with each other. It's very typical of people at Harvard that they can never agree on anything."

Deborah D. Campano

"When I was in high school, I decided I wanted to be a farm veterinarian for horses and cows. But people said, 'You're too little to handle big animals. Besides, you're a girl.' "

At the Cumberland, Rhode Island high school, Deborah D. Campano began a four-year streak of winning science fair prizes when she submitted her collection of 104 invertebrates in the ninth grade. By the time she finished high school and entered Boston University, she had reconsidered her original career choice and had decided to become a physician. "I did very well in science courses all the time. It was more of an aptitude thing than a burning desire, at the beginning."

As a freshman, she enrolled in a rigorous general chemistry course in which the professor failed about 250 out of 500 students. She received one of the two or three A's and switched her major from biology to chemistry. One afternoon of her sophomore year, while working in the organic chemistry lab, the general chemistry professor who had taught her the previous year "sent one of his researchers to get me and to say he wanted me to work for him." Campano did research in her junior and senior years for this professor, and she has published two papers on carboxylato pentaamine cobalt complexes.

"I synthesized 40 of these complexes, most of which were new. A lot were really poisonous. I could flash photolyze them and get some kinetics data. We were trying to find out different chemical parameters of the cobalt-carboxylato bond."

In addition to her research and upper level science courses, she tutored football players in chemistry and was a "floor mother" for 50 girls during her last two years of college. Last fall, she became engaged to a first-year B.U. medical student whom she had dated for the four years they were both undergraduates at B.U. Campano said her only wish besides being a physician is "to be a mother, have children, be a wife, and do all the things women do. I think now I can do both.

"I feel at this point that I'd probably like to work in a walk-in free clinic. Maybe the government would give me my supplies and a building or shack to work in. It's really silly to have two doctors' salaries in the same house. I'm sure I wouldn't have to go out and work for money. I have the idea that poor people should be able to have a family doctor, too. It shouldn't have to be hit or miss. Right now, I feel I want to be a family doctor for poor people."

Campano applied to nine other medical schools besides HMS. "The ones that impressed me the most were Penn, Vermont, and B.U. The one that impressed me the least was Harvard." HMS telephoned her and asked if she could come to the admissions office on a few hours' notice for an interview. She refused. When she was finally interviewed, she arrived at Building A early, because she had heard stories of candidates who arrive minutes before the interview and are then told they have to go to the Mass. General. She also complained that the admissions committee made no arrangements for applicants to meet with medical students.

"The interviewers have a snobby attitude about the school. The first question I was asked was, 'Why do you think you're good enough to come here?' — the exact opposite from the treatment I got at other schools. Once I got accepted and was informed of the financial plenty at Harvard, I decided to come and see what it was like. Then I got my letter with my scholarship, and I basically had no choice."

Campano is disappointed with the education at HMS. "I thought Harvard Medical School would be an exquisite teaching and learning experience. I thought Harvard would have the very best teachers and courses. It seems that Harvard has a superiority complex and thinks it's so great that it doesn't have to teach. I come from a place where people care more about the student learning. Here it's like a job. People come in, punch a clock, and spew out facts for an hour. There are exceptions, but a lot of the people they have teaching here should not be teaching. Other schools, that don't have the reputation, bend over backwards to teach. I don't think Harvard works hard enough.

"It seems their presentation has been that 'this [research] needs to be done and that needs to be done.' It's too rarely that they say, 'This can be used in this way.' In something like microbiology, which should be extremely applicable to medicine, our course was almost totally research oriented. So was biochemistry, except for the clinics." January was set aside for histology, immunology, and pathology. Campano called January "an extremely good month" but cautioned, "I don't know if we'll see more.

"There are some people who are really good teachers, who care about the learning process. This being Harvard Medical School, you'd think you would find a lot of people like that. But you don't."

Flowering plants brighten Debbie Campano's room in Vanderbilt Hall.

As the Curriculum Committee and Faculty continue to mold a different curriculum for our second year, we can only hope that the politics of academia will be superceded by sound educational planning. No wider cross section of the class could be taken than Rivera, Hamer, and Campano. They demonstrate an idealism that HMS will hopefully direct into competent and humanistic health care.

Alumni Council Candidates

On the following pages are the candidates for the Alumni Council, 1973-1976. Biographical information and a statement of each candidate's philosophy are included to aid you in voting. Please remember to return your signed ballot to the Alumni Office, 25 Shattuck St., Boston, Mass. 02115, no later than 12 noon on Friday, May 25.

Milton William Hamolsky '46

Providence, Rhode Island
B. A., Harvard College 1943

1946-48	House officer to assistant resident in medicine, Beth Israel Hospital
1948-50	Lt. to Capt., U.S. Army Medical Corps
1950-59	Resident to assistant visiting physician, BIH
1950-63	Teaching fellow to assistant professor of medicine, Harvard Medical School
1958-63	Head, Endocrine Clinic, BIH
1963-67	Brown University Professor of Medicine, Rhode Island Hospital
1963-	Physician-in-chief, Medical Service, RIH
1966-	Director, Division of Medical Research, RIH
1968-	Professor of medical science, Brown University

Fellow: American College of Physicians.

Member: Association for the Advancement of Science, American Federation for Clinical Research, American Thyroid Association, American Physiologic Society, American Board of Internal Medicine, American Society for Clinical Investigation.

Statement

For me, the profession of medicine is unique in its broad spectrum of opportunity for both self-fulfillment and service to others. For me, Harvard Medical School is unique in the breadth of its balanced diversity. The challenge will be to sustain the base of tested and proven values in medical education, research, and service, while exploring new ideas to balance experience with experiment, to provide a vigorous, yet measured, response to the forces of change in society.

I have been deeply impressed by the quality of the young men and women entering our profession, their social commitment, enthusiasm, idealism, and hunger for a role in building a better society. The responsibility of HMS is awesome, the opportunities limitless, to provide the framework — both intellectual and humanistic — for each individual to realize his self-potential and contribution to society. For enthusiasm, compassion, and the desire to help will not substitute in the long run for a balance of scientific knowledge and clinical competence.

And, somehow, since "noblesse" does "oblige," HMS must balance its primary role in teaching with creative leadership in grappling with the diverse and complex challenges swirling around us; e.g., a steady and vigorous championship of the fundamental role of research, a sustained effort towards improvement of the delivery of quality health care, increasing opportunity in medicine for minority groups and the underprivileged, a growing partnership with those skilled in socio-economic matters.

To these ends, one of the richest potential resources of HMS is its alumni(ae). The task of the Alumni Council, it seems to me, is to improve the two-way communication between the school and its alumni(ae) in a continuing effort to incorporate their broad and diverse and qualified expertise.

Nathan Smith Davis '47

Manitowoc, Wisconsin
Harvard College 1945

1947-48	Rotating Internship, Wesley Memorial Hospital, Chicago
1948-51	Family practice, Sister Bay, Wisconsin
1951-53	U.S. Army, Pusan, Korea
1953-54	Resident in internal medicine, Providence Hospital, Seattle
1954-	Family practice, Manitowoc

Statement

I feel this is a very crucial time in American medicine. The resurgence of the primary physician is fine. The increasing government involvement in medicine can be a threat or can be a stepping stone to the goal of better medicine for all — a goal to which we can all subscribe.

If selected, I would offer the experience of over 20 years of family care and would act, to some degree, as a counter balance to some of our nationally verbal alumni who have never seen a private patient, or even practiced medicine at all.

I am not against change, but am enthusiastic about the possibilities of new curriculum, or new ways to teach the old, and of the new arts and sciences that make a physician today.

The position of leadership of Harvard Medical School has never been more important. I would pledge my best to maintain and to improve Harvard's role in shaping medicine to come; to fight to retain that which is old and good and to accept and encourage improvement in any aspect of medical education and practice.

Ruth Calladine Haynes '52

Columbus, Ohio
B.S., University of Chicago 1948

1948-53	Intern, Children's Medical Center, Boston
1953-56	Resident to assistant in anesthesia, Massachusetts General Hospital
1955-56	Instructor in anesthesia, Harvard Medical School
1956-	Private practice of anesthesia, Columbus
1959	Certified, American Board of Anesthesiology

Member: American Society of Anesthesiology, Ohio State Medical Association, Ohio Society of Anesthesiology, Columbus Academy of Medicine, Columbus Society of Anesthesiology.

Statement

The future course of Harvard Medical School depends upon the performance of existing graduates, the capabilities and desires of present students, the persipacity of the admissions committee, and the continued inspiration and guidance of outstanding faculty.

Certain morals and traditions must be maintained while physical violence and dissension kept to a minimum.

Students should have a voice in the choice of curriculum but the final decision must come from individuals already familiar with the entire field of medicine.

Medical School alumni should willingly contribute constructive criticism as well as probable solutions.

Harold Charles Spear '47

North Miami Beach, Florida
B.S., Yale University 1944

1947-48	Mixed internship, St. Luke's Hospital, New York
1948-50	Surgical intern to junior assistant resident in surgery, Grace-New Haven Community Hospital
1950-51	Fellow in surgery, Mayo Clinic
1951-53	1st Lt. to Capt., U.S. Air Force Medical Corps
1953-56	Senior assistant resident in surgery to chief resident in thoracic and cardiovascular surgery, and chief resident in general surgery, G-NHCH
1954-56	Instructor in surgery, Yale University School of Medicine
1956-60	Clinical instructor in cardiovascular and thoracic surgery, University of Miami School of Medicine
1960-	Clinical assistant professor of thoracic and cardiovascular surgery, UMSM

Member: American Association for Thoracic Surgery, American College of Surgeons, Southern Thoracic Surgical Association, The Society of Thoracic Surgeons (founder-member), American College of Chest Physicians.

Statement

I feel that the direction of the School under the leadership of Dean Ebert has been most appropriate to our times. This is being accomplished, insofar as I can determine, without in any way sacrificing the quality of education offered or the excellence of the graduates. I am very appreciative of the close relationship which the School holds for its alumni and feel that this engenders not only financial support but fosters a continuing interest which allows the influence of Harvard Medical School to permeate communities remote from Boston and even from academic influence. I would hope that those of us who are actively involved in community practice might be able to reciprocate by developing an interest in Harvard Medical School on the part of talented young people in our areas, by advising the School with regard to problem areas be they professional or administrative, which might be of interest to the School and by assisting in providing a broad base of financial support.

Edward Day Harris, Jr. '62

Hanover, New Hampshire
A.B., Dartmouth College 1958

1962-64	Intern to assistant resident in medicine, Massachusetts General Hospital
1964-66	Clinical associate, National Heart Institute
1966-69	Senior resident to clinical and research fellow in medicine, MGH
1968-70	Instructor to assistant professor of medicine, Harvard Medical School
1970-	Assistant professor of medicine and chief, Connective Tissue Disease Section, Dartmouth Medical School
1970-	Staff, Mary Hitchcock Memorial Hospital, and consulting staff, Veterans' Administration Hospital

Diplomate: American Board of Internal Medicine; Fellow: American College of Physicians; Member: American Federation of Clinical Research, American Rheumatism Association, New England Rheumatism Association.

Statement

I am happy to see Harvard's growing awareness and acceptance of responsibility for social illness and for the development of more efficient health care delivery systems. To me, these new responsibilities assumed by the medical schools only emphasize the importance of strengthening Harvard's traditional role in preparing first-class teachers and clinical specialists, and perceptive investigators capable of generating important new knowledge.

Much of the load of routine medical care should be delivered by a primary physician who can emphasize principles of preventive medicine, who knows and works well with paraprofessional health organizations, and who treats the whole person. At the same time — the need for specialists, physicians who can direct evaluation and treatment of specific problems and work well with the primary physician in long-term management — will increase.

Harvard, then, in its admission policies, should continue to admit the student with superior personal and intellectual qualifications. That student must then be exposed to academic excellence and rigorous training as well as to the new awareness of the responsibility of the physician in his society.

At Harvard (as well as at Dartmouth or any other medical school) I believe a strong alumni body, in addition to helping fund needed programs, can and should serve in an advisory capacity to the dean, lending perspective of distance, years and a different way of life to decisions ranging from those of admissions policy to the curriculum. Implementation of this more active role should include regular meetings of the Alumni Council with members of the current student body.

Adolf Waller Karchmer '64

Boston, Massachusetts
A.B., Princeton University 1960

1964-66	Intern to assistant resident in medicine, Massachusetts General Hospital
1966-69	Epidemic Intelligence Office to chief, Surveillance and Investigations Unit, Epidemiology Program, Communicable Disease Center, USPHS
1969-71	Resident to clinical and research fellow, department of medicine, MGH
1971-	Instructor in medicine, Harvard Medical School
1971-	Assistant in medicine, MGH

Diplomate: American Board of Internal Medicine; Member: American College of Physicians, Massachusetts Medical Society; Phi Beta Kappa; Alpha Omega Alpha.

Statement

As a candidate for Alumni Councillor, it seems premature to strongly advocate specific actions regarding the future course of Harvard Medical School without a greater understanding of the facts and issues. The energy, objectivity, and interest which the individual brings to bear are more important than specific positions. Nevertheless I, as do most alumni I suspect, have some preconceived attitudes about the School and the role of its alumni.

Several are as follows: First, as a constituency in the School along with faculty and students, the alumni should extend their interests and involvement beyond monetary support of the institution. Alumni thought and sentiment should be represented at administrative, policy making, and operational levels. Second, during this period when socio-economic as well as scientific challenges to medicine are being recognized, Harvard should assume a position of leadership in the health care field; health care research, the development of innovative models, and the delivery and evaluation of care should be fostered. Basic and clinical research should not be forgotten but should be supplemented by activity in the health care sphere. Third, while in no way wishing that faculty research be abandoned, a recommitment of the faculty to the stimulation and teaching of students seems merited.